

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/11662

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☒ Claims Nos.: 36, 37, 52, 55
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

International Application No
PC 03/11662

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/72 C12N15/12 A61K48/00 A61K38/00 C07K16/00

10/532482

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBL, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	OSTERHOFF C ET AL: "CLONING OF A HUMAN EPIDIDYMI-SPECIFIC MRNA, HE6, ENCODING A NOVEL MEMBER OF THE SEVEN TRANSMEMBRANE-DOMAIN RECEPTOR SUPERFAMILY" DNA AND CELL BIOLOGY, NEW YORK, NY, US, vol. 16, no. 4, 1997, pages 379-389, XP002925525 ISSN: 1044-5498 see the whole document, especially abstract and page 387, right column, last paragraph ---	1-58
X	EP 0 805 204 A (INST HORMON UND FORTPFLANZUNGS) 5 November 1997 (1997-11-05) see the whole document ---	1-58

-/--

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

24 March 2004

Date of mailing of the international search report

31/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Grosskopf, R

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p data-bbox="245 254 852 499">LIU MARJORIE ET AL: "GPR56, a novel secretin-like human G-protein-coupled receptor gene" GENOMICS, vol. 55, no. 3, 1 February 1999 (1999-02-01), pages 296-305, XP004445033 ISSN: 0888-7543</p> <p data-bbox="245 527 771 590">WO 00 34473 A (ZYMOGENETICS INC) 15 June 2000 (2000-06-15)</p>	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/11662

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0805204	A	05-11-1997	DE	19617940 A1	30-10-1997
			EP	0805204 A2	05-11-1997
WO 0034473	A	15-06-2000	AU	2162000 A	26-06-2000
			WO	0034473 A2	15-06-2000

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claim 50 is directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition. Although claims 51 and 52 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.2

Claims Nos.: 36,37,52,55

In principle, the present application is totally non-unitary since the various polypeptides or fragments thereof (most of them have no function at all) from different organisms do not share a common special technical feature (which could only be a common structural feature, i.e. a sequence element) in view of the known sequence of the HE6 and its counterparts in other mammalian species.

An explicit lack of unity objection, however, has not been raised in view of the following considerations.

First, it should be mentioned that if such a objection had been raised, the search would have been restricted to SEQ ID NO: 1 (which is certainly not Applicant's desire).

Second, it is impossible to determine the number of potential alleged inventions, especially when taking into account that the claims are not even restricted to the specific sequences but include (undefined) functional variants or "related" sequences having a certain degree of identity. Moreover, the sequences (fragments) of e.g. Claim 1 do not relate to a single defined protein fragment but include all possible three reading frames (which renders the alleged invention completely obscure and potentiates the possible number of fragments).

Thus, and from a different point of view, the present set of claims encompasses an uncountable number of entities, said entities, in principle, correspond to independent claims (even when contained in one claim as alternatives).

This means that in addition to the objection for lack of unity, an objection for lack of clarity has to be raised which renders a complete (and meaningful) search impossible.

This Authority is also aware that a search for the specific sequences (to which the claims are not restricted) will possibly not reveal further relevant documents since the sequences are derived from the same known protein (which however, as mentioned above, cannot establish unity). This would certainly not apply when searching the (short) sequences which are claimed in a broad manner.

Anyhow, as long as the claimed sequences are not limited to those sequences which share a single common special (i.e. novel) sequence element, the above mentioned objections will still apply and, consequently, neither a meaningful search nor a meaningful examination can be carried out.

In view of these considerations, the present search had to be limited to the complete protein.

In addition, also no search at all could be carried out with regard to compounds which are not defined by any structural feature (antagonists,

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

inhibitors etc.) and claims relating to the use of said compounds. In principle

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.